Resource Management Plan

Wellington County Agreement Forest

April 1, 1987 to March 31, 1992

Ontario

Ministry of Natural Resources
Ministère des Richesses naturelles

Lyn McLeod Minister/Ministre

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Ministry of Natural Resources
Cambridge District Office
Beaverdale Road
Cambridge, Ontario
N3C 2W1
Telephone (519) 658-9355

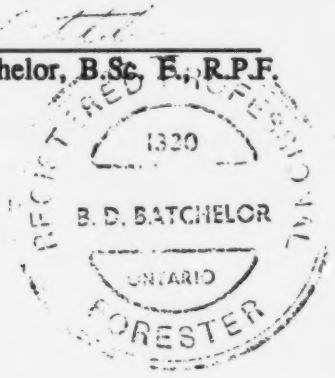
WELLINGTON COUNTY AGREEMENT FOREST

RESOURCE MANAGEMENT PLAN

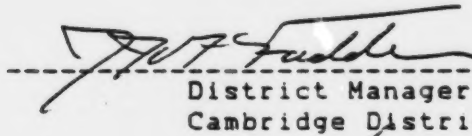
1987-1992

I hereby certify that this plan has been prepared under my personal supervision and that all field work and calculations have been carried out to the best of my skill and judgement.

Brian D. Batchelor, B.Sc. F., R.P.F. Date

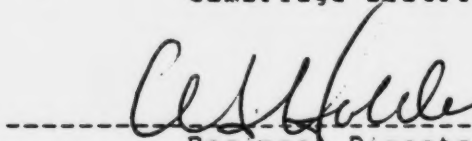


I have read this "Resource Management Plan" (1987-1992) for the Wellington County Agreement Forest and found that it is consistent with other resource management plans, land use guidelines and/or policies for the area. I recommend that the plan be approved for implementation.



District Manager
Cambridge District

Dec 9, 1988
Date



Regional Director
Central Region

1989-06-30
Date

I certify that this "Resource Management Plan" (1987-1992) for the Wellington County Agreement Forest was presented to and accepted by the Wellington County Council on November 26, 1987.

John C. Green
Warden, Wellington County

13 February 13 1989
Date

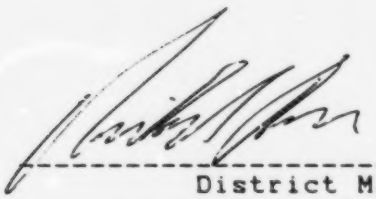
Clerk

13 February 13 1989
Date

I have read this "Resource Management Plan" (1987-1992) for the Wellington County Agreement Forest and certify that it is consistent with other resource management plans, land use guidelines and/or policies for the area.

Forest Management Supervisor	9 Dec. 1988 Date
Support Services Supervisor	Dec 9/88 Date
Fish and Wildlife Supervisor	Dec. 9/88 Date
Lands and Minerals Supervisor	Dec. 12/88 Date
Parks and Recreation Supervisor	9 Dec. 1988 Date

I have read this "Resource Management Plan" (1987-1992) for the Wellington County Agreement Forest and found that it is consistent with other resource management plans, land use guidelines and/or policies for the area. I recommend that the plan be approved for implementation.



District Manager
Wingham District

May 15/89
Date

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PREFACE

Agreement Forests are parcels of public land being managed for "forestry purposes" on behalf of the landowner (Townships, Counties, Regional Municipalities or Conservation Authorities) by the Ontario Ministry of Natural Resources (MNR). An Agreement under the "Forestry Act" between the Ministry and the owner makes this joint venture possible.

Under the terms of the Agreement the Forest is managed for "Forestry Purposes" which includes the production of wood and wood products, provision of proper environmental conditions for wildlife, protection against floods and erosion, recreation, and protection and production of water supplies. The term of the Agreement is for no less than 20 years and during the last year of the Agreement the owner must select one of three options which will govern the management of the forest upon expiry of the Agreement. These options are as follows:

1. The owner pays the Province the accumulated net costs associated with the management of the forest and management (under a formal agreement) ceases. If revenue has exceeded expenditures then the Province will pay the owner this amount;

2. The owner may sell the Forest to the Province for the original acquisition price;

3. The owner may extend the Agreement for a further period of not less than twenty years and not more than fifty years.

Annual costs associated with the management of the Forest are borne by the Ministry of Natural Resources and charged against the individual forest account. Annual revenues go to the Provincial Treasurer but are credited to the individual forest account.

Planning the management of the forest is the responsibility of the MNR and is done in two phases. The first is a five year management plan outlining the work that will take place over the next five years in accordance with the specific objectives of MNR and the owner in the management of the Forest.

A planning team consisting of representatives of the various programs within MNR and the forest owner is established to prepare this plan. This "team" ensures that the various objectives and interests of MNR and the owner are incorporated within the plan.

The second phase of planning is an annual report which outlines the work to take place in the following year, reports on the work done in the preceding year and provides an audited financial statement showing the annual expenditures and revenues and the accumulated expenditures and revenues for the Forest. This report is sent to the forest owner for review and approval.

Administrative and Physical Description

2.1 Physical Description

The Wellington County Agreement Forest is 521.4 hectares of land owned by the County and managed by the Ministry of Natural Resources.

The forest consists of 12 separate forest tracts (Table 1). Eleven of these tracts are located within the Cambridge Administrative District with the remaining tract (Smale Tract, Minto Township) administered by Wingham District. Appendix D contains a map showing the location of the individual tracts.

2.2 History and Present Status

Wellington County began acquiring lands for "forestry purposes" in 1943 with the purchase of the Ritch Tract. Although the County and the then Department of Lands and Forests managed these tracts of lands jointly a formal agreement was not signed until June 18, 1964. This Agreement was signed under the Forestry Act and was for a twenty year period (April 1, 1963 to March 31, 1983). A further twenty year Agreement was signed on November 23, 1983 for the period April 1, 1983 to March 31, 2003.

2.3 Planning

This plan covers the five year term from April 1, 1987 to March 31, 1992. It is being coordinated by the Cambridge District of the Ministry of Natural Resources with input from Wingham District. It is designed to outline what work will be done on the Agreement Forest for the five year term.

An annual report will also be submitted to the County for approval. This annual report will summarize the work completed in the previous fiscal year, outline the management to be done during the year of the report, and provide a brief forecast of the work intended for the next fiscal year.

TABLE 1

LIST OF PROPERTIES

WELLINGTON COUNTY AGREEMENT FOREST

Tract	#	Township	Lot	Conc	Area Ha	Area Ac
Ritch	1	Peel	18	XVII	81.0	200
Victory	2	Arthur	10	I	40.5	100
Peacock	3	Erin	8	VII	28.3	70
Badenoch	4	Puslinch	31	X	40.5	100
Little	5	Puslinch	9	III	78.9	195
Cumnock	6	Nichol	1	XV	40.5	100
McNamara	7	W. Luther	9	IV	40.5	100
Mulhall	8	W. Luther	9	IV	40.5	100
Benham	9	Eramosa	32	VII	20.2	50
Everton	10	Eramosa	10	VI	9.7	24
Smale	11	Minto	1	VII	44.1	109
Fleming	12	Maryborough	5	VI	56.7	140
TOTAL AREA					521.4	1288

Report on Past Operations

3.1 Harvest and Thinning Operations

During the period of the preceding operating plan (April 1, 1983 to March 31, 1987) it was proposed to cut a total of 2708.8 cubic metres.

Two major projects have been on going for this time period. The first is the salvaging of dead and dying Scots pine that has been attacked by the disease known as "Tip Blight" (Sphaeropsis sapinea). The primary damage to the Agreement Forest has been in stand "h" of the Little Tract where close to 100 percent of the Scots pine have been killed on approximately 21 hectares. This material is presently being removed from the area by inmates from the Maplehurst Correctional Center in Milton at no cost to the Agreement Forest.

The second project has been the clean-up and salvaging of Stand "c" at the Cumnock Tract. Approximately 4 hectares of this stand was destroyed by a tornado on May 31, 1985. This project was also accomplished at no cost to the Agreement Forest since it was carried out under a special program developed by the Ontario Government to assist in cleaning up the damage from the tornado. The Ontario Paper Company in Thorold purchased 320 cubic metres of salvaged Norway spruce.

The clean-up of the Cumnock Tract has resulted in more spruce being produced than was forecast in the previous plan, while the Little Tract project has produced slightly more Scots pine than was originally forecast.

The actual volume cut was 1951 cubic metres as summarized in Table 2. This volume is below the forecasted amount due to the fact that most of the material that should be cut is small enough that it is considered "precommercial" in size which means that it would cost money to have the trees cut.

Rather than spend money on these thinnings it was decided to try and take advantage of special programs that would get the projects done without cost to the Agreement Forest. The thinnings at the Little Tract and the salvaging project at the Cumnock Tract are two examples of this.

3.2 Regeneration

Under the previous plan planting was proposed on 9.7 hectares, primarily where we intended to remove dead and dying Scots pine.

The actual amount of planting completed was 7 hectares. Of this 5 hectares was done at the Badenoch Tract and 2 hectares at the Little Tract.

At Badenoch the project consisted of underplanting the existing red pine in which a thinning operation had taken place. The soils in this Tract may not be suitable for red pine so the planting was an attempt to ensure that a desirable species (white spruce, white pine) would be established if the red pine began to "dieback" in the way the red pine died at the Peacock Tract.

At the Little Tract the planting was in areas that had been cleared of dead and dying Scots pine. As well, 4 hectares were seeded with red oak acorns in an effort to establish this species in some of the areas cleared of Scots pine.

3.3 Physical Improvements

At the present time there are approximately 15.48 kilometres of roads within the Agreement Forest. The roads were established to aid in resource management activities, to provide access in case of fire, and for use by the general public in passive recreational pursuits (hiking, skiing etc.).

The previous operating plan restricted physical improvements on the forest to the maintenance of existing roads, parking lots, and fences.

Since April 1, 1983 2.5 kilometres of roads have required maintenance which for the most part has been mowing or spraying the right-of-way to control herbaceous vegetation. Installation of a culvert and graveling of 0.2 kilometres at the McNamara Tract has been the only repair project necessary.

In the past three years 8.4 kilometres of boundary were marked with red paint (circles 10 cm in diameter) to indicate that a person is leaving the Agreement Forest and entering private land.

Maintenance of approximately 3.8 kilometres of the recreation trail at the Little tract was carried out in 1983 by a local ski club at no cost to the Forest.

Table 2

Report on Past Operations

(April 1, 1983 - March 31, 1987)

1. Summary of Proposed Cutting Operations vs. Actual Cut

i) Area Cut by Working Group (hectares)

	Proposed	Actual
Working Group	Area(ha)	Area(ha)
White Pine	7.3	1.5
Red Pine	10.6	15.5
Jack Pine (&Scots)	22.5	21.5
White Cedar	8.0	1.0
Spruce (White,Norway)	14.4	13.5
Other Conifer	2.5	0.0
Other Hardwoods	0.0	1.0
Total	65.3	54.0

ii) Volume cut by species (Cubic metres)

	Proposed	Actual
Species	Volume (m^3)	Volume (m^3)
White Pine	365.2	66.0
Red Pine	516.4	264.0
White Spruce (&Norway)	353.2	506.0
Scots Pine (&Jack)	1026.0	1098.0
White Cedar	269.2	---
European Larch	9.2	---
Other Conifer	47.2	---
Sugar Maple	16.4	---
Soft Maple	---	17.0
White Ash	11.6	---
Black Cherry	11.6	---
Poplar	45.2	---
Other Hardwoods	37.6	---
Total	2708.8	1951.0

Description of Resources

4.1 Timber Resource

The Wellington County Agreement Forest consists primarily of coniferous plantations. Of the 410.7 hectares of productive forest land on the Agreement Forest approximately 254.8 hectares (62%) are plantations. This large percentage of the forest in plantations reflects one of the original goals of the County in beginning this program which was to reforest abandoned agricultural land.

An Inventory of the Agreement Forest in 1980 showed that the plantations are for the most part in the 21-40 year age-class as shown in Table 3 . This Table shows the forest stands amalgamated into "Working Groups"by "age-class". A Working Group is an aggregation of stands having the same predominant species. These stands will be managed under the same broad silvicultural system.

The working groups are divided into "age-class" intervals which are used to help describe the forest as well as providing a clearer picture of the work necessary during the planning period. The twenty year interval chosen is the standard age class interval used in Ontario. The first age class interval used in Table 3 is "B & S" which stands for "Barren and Scattered". This interval is used to describe productive forest land that at the present time contains only a few scattered trees. This condition usually follows a major disturbance such as the tornado at the Cumnock Tract.

The last interval on this table is described as "uneven aged" which is the description for upland hardwood stands in which trees of different sizes and ages are present on the site. These stands are managed by the "selection system" in which individual trees are selected for removal to perpetuate this "uneven aged" condition.

Since the last inventory was completed in 1980 several changes have occurred to some of the tracts. Table 3 will be revised over the period of this plan following the reinventory of some of the tracts (e.g.. Cumnock, Little) which have experienced extensive changes.

Table 3

SUMMARY OF AGREEMENT FOREST AREA

by Age-Class and Working Group in Hectares

WELLINGTON COUNTY AGREEMENT FOREST

Non-Forested	3.5
Water	2.4
Swamp and Non-Productive Lowland	104.8

PRODUCTIVE FOREST LAND

Working Group	B & S	1-20	21-40	41-60	61-80	Uneven Aged	Total
White Pine		10.0	35.3				45.3
Red Pine			47.9				47.9
Scots Pine			50.3				50.3
Jack Pine			7.5				7.5
White Spruce	4.0	45.2	39.6				88.8
White Cedar	1.7		61.0	17.0			79.7
European Larch			15.0				15.0
Other Conifers					5.2		5.2
Sugar Maple						21.5	21.5
Soft Maple		1.0		7.5			8.5
Poplar			2.0	18.5	16.0		36.5
Other Hardwoods	4.5						4.5
Total	10.2	56.2	258.6	43.0	21.2	21.5	410.7

Total Agreement Forest Area 521.4

4.2 Fish and Wildlife Resources

The Wellington County Agreement Forests contain extensive areas of natural forest habitat, reforested areas and wetlands which provide a wide range of fish and wildlife resources. Many of the forest tracts have been identified as providing Provincially, Regionally, and/or locally significant fish and wildlife habitat as well as species.

In summarizing these significant habitats Table 4 identifies whitetailed deer winter concentration areas, coldwater trout streams, and wetlands[1], as well as the status of known significant wildlife species.

This list of significant habitat and species should however not be considered as exclusive since future studies may identify additional significant features of the Agreement Forest. If this happens then Table 4 will be revised.

4.3 Areas of Natural and Scientific Interest

Areas of Natural and Scientific Interest (ANSI) are areas of land and water that contain natural landscapes or features with values related to protection, natural heritage appreciation, scientific study or education.

ANSI's can be of local, regional or provincial significance and may represent earth and/or life science components. Earth science sites identify various rock types, fossil assemblages and associations of landforms representative of Ontario's past and present geological environments. Life science sites identify landscapes and environments that support relatively undisturbed biotic communities where the associated plants and animals have been identified for representation. At the present time none of the tracts are within an ANSI.[2]

4.4 Environmentally Sensitive Areas

Wellington County has recognized in their draft Official Plan[3] that "*the careful conservation of our land, animal, plant, water and air resources are necessary to provide healthy, prosperous and enjoyable communities*". The County has mapped out areas deemed to be "Environmentally Sensitive" and the tracts that fall within these areas are shown in Table 5.

---

1. Guidelines for Wetlands Management in Ontario (MNR)

2. Life Science Areas of Natural and Scientific Interest in Site District 6-1, R. Klinkenberg Sept.1984 M.N.R. ISBN 0-7743-9514-1

3. Wellington County Draft Official Plan, September 1986

TABLE 4

FISH and WILDLIFE RESOURCES

Wellington County Agreement Forest

Tract	Significant Fish and Wildlife Habitat	Wetlands	Significant Species
Ritch	white-tailed deer winter concentration area	Present but not evaluated	---------
Victory	Stream (uninventoried)	Present but not evaluated	Magnolia Warbler (Possibly nesting)-Regionally Significant Spotted Coralroot- Regionally Significant
Peacock	white-tailed deer winter concentration area	-----	-------
Badenoch	coldwater stream Brook Trout present	part of Class 5 Wetland-Locally Significant	--------
Little	white-tailed deer winter concentration area	part of Class 1 Wetland Provincially Significant	Red-Shouldered Hawk (confirmed breeding, 1985) Provincially Significant Pine Warbler (Probable Breeding) Regionally Significant Four-toed Salamander Provincially Significant
Cumnock	-------	Present but not evaluated	-------
McNamara	-------	Present but not evaluated	Cooper's Hawk (confirmed breeding 1983) Provincially Significant
Mulhall	-------	Present but not evaluated	------
Benham	White-tailed deer winter concentration area cold water stream	Present but not evaluated	------
Everton	White-tailed deer winter concentration area	-----	------
Smale	-------	-----	------
Fleming	-------	-----	------

Table 5

SIGNIFICANT NATURAL FEATURES

Tract	Township	Feature
Ritch	Peel	Ritch Tract Environmentally Sensitive Area*
Victory	Arthur	none
Peacock	Erin	within Brisbane Woods I **
Badenoch	Puslinch	Moffat Marsh***
Little	Puslinch	Oil-Well Bog/ Little Tract Regional life science area***
Cumnock	Nichol	none
McNamara	West Luther	none
Mulhall	West Luther	none
Benham	Eramosa	none
Everton	Eramosa	none
Smale	Minto	none
Fleming	Maryborough	none

* North Wellington Environmentally Sensitive Areas
Centre for Resources Development, Publication # 84
University of Guelph, Elrick et. al.

** Credit River Watershed, Environmentally Sensitive Areas
Ecologistics Ltd. June 1979, Prepared for the Credit Valley Conservation Authority

*** South Wellington Environmentally Sensitive Areas Study
Centre for Resources Development, Publication # 79
University of Guelph, Eagles, P. et. al.

OBJECTIVES AND STRATEGIES

This section will identify relevant objectives of Wellington County and the Ministry of Natural Resources and outline how they will be met or dealt with in the management of the Agreement Forest during the period of this plan.

5.1 Wellington County

The County of Wellington in their draft Official Plan (1986) have stated that:

> *Wellington County recognizes the many important functions of our natural environment. Forest areas, while being aesthetically pleasing, provide us with wood and prevent the erosion of good agricultural soils*

The County has no specific objectives relating to the management of their Agreement Forest but they are committed to the program and have proposed a policy that states:

> *The County would also like to encourage the retention of woodlots, wherever reasonable, to help prevent erosion and to add to the scenic quality of Wellington County*

The Official Plans of the townships in which the various forest tracts are located all have the tracts designated "Open Space".[4]

5.2 Ministry of Natural Resources

The Ministry of Natural Resources has a number of provincial objectives that it achieves through the management of the Agreement Forests. These objectives are outlined in the Cambridge District Land Use Guidelines and specific targets have been assigned for the achievement of these objectives in response to the "Southern Ontario Coordinated Program Strategy".

5.2.3 General Operating Principles

The following policies apply to all MNR programs:

5.2.3.1 Integrated Resource Management

> *All MNR programs will be integrated to ensure the efficient use of land and water to achieve ministry objectives*

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4. Township Official Plans referred to are listed in Appendix 4

MNR has identified integrated resource management as a major means of applying the Land Use Guidelines. To ensure that there is this integration the planning team preparing this plan consists of members from various MNR programs. All prescriptions for work to be done on the Agreement Forest during the period of the plan have been prepared by the planning team. In addition to this the annual reports outlining the work to be done on the forest will be circulated to the various programs within MNR for review and comment.

5.2.3.2. Public Safety

It is a general policy that the Ministry of Natural Resources:

> *will promote the safe pursuit of outdoor recreation and resource production activities*

On Agreement Forests, MNR is deemed to be the "Occupier" under the Occupiers Liability Act. According to Section 4 of this act, non-paying recreational entrants on these properties assume their own risks. So long as the occupier does not intentionally create a danger for entrants or engage in an activity likely to bring serious injury to an entrant, he will not be liable to a non-paying recreational entrant on his land.

However, in light of the above, the Ministry has a duty to take "reasonable" care regarding conditions and activities on the Agreement Forest.

In implementing the above policy on the Agreement Forest the Ministry will:

1. Identify by means of a sign(s) any known physical dangers (ie. deep water)

2. Undertake forest management operations in a safety conscious manner and notify users of the forest when these operations are in progress

3. Post signs advising users of the range of activities permitted on the forest.

4. Increase the awareness of users of the presence of other users. Encourage appropriate dress during hunting seasons.

5.2.3.3. Environment

The ministry will conduct its activities in an environmentally responsible manner

As stated in the "Description of Resources" all those tracts that are within an "Environmentally Sensitive Area" as designated by the County have been identified. Management prescriptions developed for these tracts have taken into account this designation and will not reduce their ecological significance.

At the present time none of the tracts are within a Provincial Area of Natural or Scientific Interest(ANSI).

Although no provincially endangered species of animal or plant has been identified on the tracts there are some species that are considered to be of provincial or regional significance. The locations of these species have been noted and are identified in Table 4. Management activities will be sensitive to the presence of these species and their habitat.

All forest management activities, as well as recreational support activities are at the present time exempt from the requirements of the Environmental Assessment Act.[5]

5.2.3.4. Energy

The ministry will undertake its activities so as to contribute to the provincial energy objectives of increasing the level of energy self sufficiency

To implement this policy the Ministry of Natural Resources is committed to encouraging the use as fuelwood of the smaller and lower grade material produced in thinnings from the Agreement Forest.

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5. Environmental Assessment Procedures Manual for MNR Activities Procedure No. PS 4.02.01 (FM-AF) Jan. 2, 1985

5.2.4. Specific Ministry of Natural Resources Objectives

5.2.4.1 Forestry

The Ministry of Natural Resources objective for forestry in southern Ontario is to:

> *provide for an optimum contribution to the economy by forest-based industries consistent with sound environmental practices and to provide for other uses of the forest*

The Cambridge District target to help achieve this objective is to produce an annual continuous supply of 158,900 cubic metres of wood for industrial purposes by the year 2020.

As outlined in the section "Proposed Management Activities" of this plan 19.6 hectares has been allocated annually for cutting which should produce an annual volume of 673 cubic metres of timber. This represents 0.4% of the Cambridge District Target of 158,900 m^3 for the year 2020.

The purpose of this forest management work is to improve the overall quality of the growing stock present, and to generate forest products. This improvement will result in increasing valuable forest products being obtained from thinnings on the forest as well as ensuring that the forest is capable of sustaining continued harvesting at regular cycles.

To help ensure that this predicted volume is removed the Ministry will promote timber sales from the Forest, encourage the utilization of smaller material, and make use of various social programs to conduct "noncommercial" thinnings.

The management of the Agreement Forest is also important to the Ministry of Natural Resources in that it provides areas to demonstrate proper forest management techniques to private landowners.

5.2.4.2 Wildlife

Agreement forests play an important role in maintaining wildlife populations within the municipality. Over the past years wildlife on these areas have been heavily used by the general public for a wide range of uses (hunting, trapping, viewing etc.) which is consistent with the MNR goal of managing the forest for multiple-use.

The Ministry of Natural Resources objective for wildlife management in southern Ontario is to:

> *provide opportunities for social and economic benefits from wildlife recreation and fur harvest consistent with the maintenance of healthy wildlife populations*

More specific objectives as shown primarily in the Cambridge District Land Use guidelines are:

Hunting
- -to provide opportunities sufficient to maintain the present rate of participation and quality of hunting by residents; and
- -to maintain the contribution to the economy of hunting by non-residents

Trapping
- -to sustain the maximum yield from wild furbearer populations while sustaining the present diversity of fur types;
- -control of nuisance beaver; and

Other uses
- -to prevent additional species from becoming endangered or threatened;
- -to improve the status of existing endangered or threatened species with the objective of removing them from the endangered species list; and
- -to maintain populations of all wildlife species (both non-game and game) at levels sufficient to:
  - -provide opportunities for recreational enjoyment, aesthetic appreciation, scientific investigation, and educational uses,
  - -provide benefits from tourism,
  - -ensure environmental quality and ecosystem integrity, and
  - -ensure the safety of the public

The goal of wildlife habitat management is to enhance the existing wildlife habitat and to maintain or improve populations of all wildlife species (game and non-game) with little or no significant loss in forest production potential.

To achieve this goal important wildlife areas and species have been identified (Table 4), and a detailed set of wildlife habitat prescriptions[6] has been prepared.

---

6. Prescriptions for Wildlife Habitat Management of Selected Agreement Forests in Cambridge District (MNR), Coulson 1983

Preparation of management prescriptions for the individual tracts incorporated the above.

Properties presently available for hunting and trapping should remain available in order to meet the management objectives. Present use of the Agreement Forest tracts accounts for a significant proportion of all hunting and trapping occurring within the County.

5.2.4.3 Fisheries

The Ministry of Natural Resources objective for fisheries management in southern Ontario is to:

> *provide opportunities for recreation and economic benefits consistent with the maintenance of healthy fish communities*

More specific objectives are:

Sport Fishing
-to meet demand for sport fishing within the limits of a wisely managed and rehabilitated resource;

Bait Fishing
-to maintain current bait fish production

Rare and Endangered Species
-to prevent the extirpation of any native fish species.

As shown in Table 4 two of the tracts have been identified as containing sections of a coldwater stream that is capable of supporting Brook Trout. Proposed management activities in or near these locations have been modified to protect the existing fisheries resource.

In addition to this modification of the management activities MNR may direct some projects, carried out under the Community Fisheries Involvement Program (CFIP), towards these tracts.

5.2.4.4 Recreation

The Ministry of Natural Resources recognizes that recreational use of the Agreement Forest is increasing substantially, and the Ministry has an objective to:

> *encourage the availability of a wide variety of outdoor recreation opportunities*

The Little Tract has been identified in the District Land Use Guidelines as an area with high recreational value.

To encourage recreational use of this tract and other forest tracts parking lots have been established, roads constructed, and garbage pickup instituted in many of the tracts. The Ministry has also encouraged the establishment of a recreational trail in the Little Tract.

These activities will continue plus the Ministry will be preparing "signs" for those Tracts that sustain a large amount of recreational use. These signs will be produced in conjunction with our objective for "Public Safety" and will outline the activities occurring on the Tract and in some cases will encourage certain user groups to use defined trails.

5.2.4.5 Mineral Resources

The Mineral Aggregate Resources Policy Statement requires the Ministry of Natural Resources to have regard to the importance of mineral aggregates and to ensure that the overall provincial interest is taken into account in any related planning action.

Six of the Agreement Forest properties have been identified as containing medium to low potential gravel deposits. These tracts are as follows:

Victory - three areas of low potential
Benham - areas of medium and low potential
Peacock - large area of low potential
Fleming - small area of low potential
Cumnock - area of low potential
Little - large area of low potential
small area of medium potential

These areas have been mapped and are on file at the Cambridge District Office.

The management of these properties for forestry purposes helps to ensure the conservation of these deposits. Extraction of this resource is not proposed in this plan and would not be considered as an option within the confines of the Forestry Act.

Proposed Management Activities

6.1 Harvest and Thinning Operations

All stands proposed for a harvest or thinning operation during the operating plan period are listed in Table 6. Tree species abbreviations are shown in Appendix A.

The data shown in Table 6 was derived from the 1981 "Operational Cruise" of all stands of the Agreement Forest. An "Operational Cruise" is a sample of each stand and from this a fairly accurate estimate of the volume of wood in an area is produced. The computer print-out listing individual stand data for all the stands in the forest is stored at Cambridge District Office.

The highest priority for thinning in the next five years will be the conversion of the Scots pine stands to a more desirable species. This project is necessary due to the high incidence of "tip blight" which has caused considerable damage to Scots pine stands in the County. Stand "h" at the Little Tract has been the site of the greatest damage to the Agreement Forest but all pure Scots pine stands are at risk, primarily those stands that are between 20 and 40 years of age.

The other stands that have been proposed for thinning or harvesting are for the most part plantations that require thinning to remove the poorer quality stems and provide increased growing space for the remaining trees.

Detailed prescriptions outlining the actual treatment proposed for each stand are shown in Appendix B.

Many of these proposed thinning operations are of a "pre-commercial" nature due to the small size of the material to be removed. If a market cannot be found for this material then the Ministry of Natural Resources will attempt to take advantage of various "social" programs that may be available to get this material cut. An example of this is the cutting currently taking place at the Little tract. This cutting is being done by inmates from the Maplehurst Correctional Centre in Milton at no cost to the Agreement Forest.

6.2 Regeneration

Tree planting will be required on the Scots pine sites that have been cleared. A total of 55.3 hectares of Scots pine working group have been proposed for clearing however a good percentage of these areas probably will not require artificial regeneration due to the presence of natural regeneration. The determination of which sites require artificial regeneration will be made on a site by site basis.

6.3 Physical Improvements

As in the case of the previous plan physical improvements will be primarily limited to the maintenance of existing roads, parking lots, and fences.

The only exception will be the installation of improved "signage" at those tracts where it is deemed necessary to ensure public safety. At the present time we will establish signs at the Little and Peacock tracts.

Table 6

WELLINGTON COUNTY AGREEMENT FOREST

PROPOSED CUTTING OPERATIONS 1987-1992

Volume by Species - Net Merchantable (cubic metres)

Tract	Stand #	Working Group	Area (ha)	B. A. m2/ha	Pw	Pr	Sw	Pj & Ps	Ce	Le	Oc	Mh	Ms	Aw	Bd	Cb	Po	Oh	Total
Ritch	c	Scots Pine	2.0	15.0				77											77
Victory	a	White Spruce	8.0	31.9	31	94	166	33										6	330
"	b	Jack Pine	1.0	13.5				25											25
"	e	White Spruce	0.5	29.0			18												18
"	g	Scots Pine	9.0	12.5				181											181
Little	b	Red Pine	5.0	22.6		262	7	15									1		285
"	e	Red Pine	0.5	20.1		19		10											29
"	f	Red Pine	2.0	20.9	41	51		9											101
"	g	White Pine	0.5	37.3	18														18
"	h	Scots Pine	21.0	16.0				300											300
"	j	White Pine	4.0	16.5				111											111
McNamara	f	White Pine	11.0	20.8	275		92					16		6		12	5	12	418
"	i	Scots Pine	2.0	18.6				127											127
Mulhall	a	Scots Pine	1.0	10.1				37											37
"	j	Scots Pine	1.0	7.8				19											19
Benhaa	a	Jack Pine	6.0	17.2				202											202
Everton	a	White Spruce	2.0	20.8				82											82
"	c	Scots Pine	2.0	23.3				123											123
Cumnock	b	Scots Pine	7.7	29.0	26		43	316								6	18	2	411
"	d	Scots Pine	2.6	23.0				16											16
"	f	White Pine	3.8	38.0	124		20	33									4	11	192
"	g	White Pine	1.0	33.0	19		1							15			1	2	38
																			0
					534	426	347	1716	0	0	0	16	0	21	0	18	29	33	3140

Appendix A

Species Legend

White Pine	Pw	Sugar Maple	Mh
Red Pine	Pr	Soft Maple	Ms
Jack Pine	Pj	White Ash	Aw
Scots Pine	Ps	Basswood	Bd
White Spruce	Sw	Black Cherry	Cb
White Cedar	Ce	Poplar	Po
European Larch	Le	Black Ash	Ab
Hemlock	He	Beech	Be
Norway Spruce	Sn	Elm	Em
Other Conifer	OC	Yellow Birch	By
		Other Hardwood	OH

U.C.L.- Unclassified Land.- This is applied to all areas that are not clearly defined by any other classification. e.g. gravel pits.

P.F.- Protection Forest:- Forested land managed primarily to exert beneficial influence on soil, water, landscape, or for any other purpose when the production of merchantable timber is incidental. Usually applied to areas where access is limited by topography or drainage.

B & S - Barren & Scattered:- Productive forest land which, because of natural or artificial disturbance, contains only scattered trees or no trees at all with either shrub-cover or bare soil. Treatment is required to restore such areas to productivity.

Appendix B

PROPOSED MANAGEMENT ACTIVITIES

by Tract

RITCH TRACT

Stand "a"

Description

Lowland forest consisting of approximately 50% cedar, 20% poplar, 20% soft maple, with the remaining 10% a variety of species. This stand is 48 hectares in size at the back(north) of this tract along the municipal drain.

Prescription

There is no work planned for this area at the present time.

Stand "b"

Description

This stand is 27 hectares of very unproductive lowland associated with stand "a". It has been described on the map as poplar "Barren and Scattered". This description means that the area is regenerating to primarily poplar and this regeneration is still quite scattered and young.

Prescription

As with stand "a" there is no work planned for this stand at the present time.

Stand "c"

Description

This is a 2 hectare Scots pine (60%) and jack pine (40%) plantation that was 38 years old at the time of the "Operational Cruise" in 1981. Some white spruce and tolerant hardwood regeneration (sugar maple, white ash) is present in the understory.

The majority of the Scots and jack pine are poorly formed and the Scots pine is quite vulnerable to the tip blight disease which has caused problems in other tracts of the Agreement Forest.

This tract is within an Environmentally Sensitive Area and has been identified as a Local Biological Feature. It is also a winter deer concentration area and is considered to contain good wildlife habitat for a variety of other species.

Prescription

It is proposed to reduce the Scots pine and jack pine component of this stand to favour the white spruce and the natural hardwood regeneration.

To accomplish this will require selectively thinning the Scots and jack pine to remove approximately 30% of the existing stems. Only the poorest quality Scots and jack pine would be removed at this time.

Since only the poorest quality stems would be removed this proposed operation may not be completed if a market for this material is not found, or if the thinning cannot be accomplished under a "social program".

Stand "d"

Description

This 4 hectare stand is at the front of the Tract. It is a "mixed wood" stand consisting of approximately 30% red pine that was planted at the same time as stand "c". Unfortunately planting did not take fully with the result that in addition to the red pine the stand has filled in with approximately 30% poplar, 10% cedar, and the remaining 30% a variety of species such as balsam fir, ash, and dogwood.

Prescription

No work is planned in this stand for the duration of the plan.

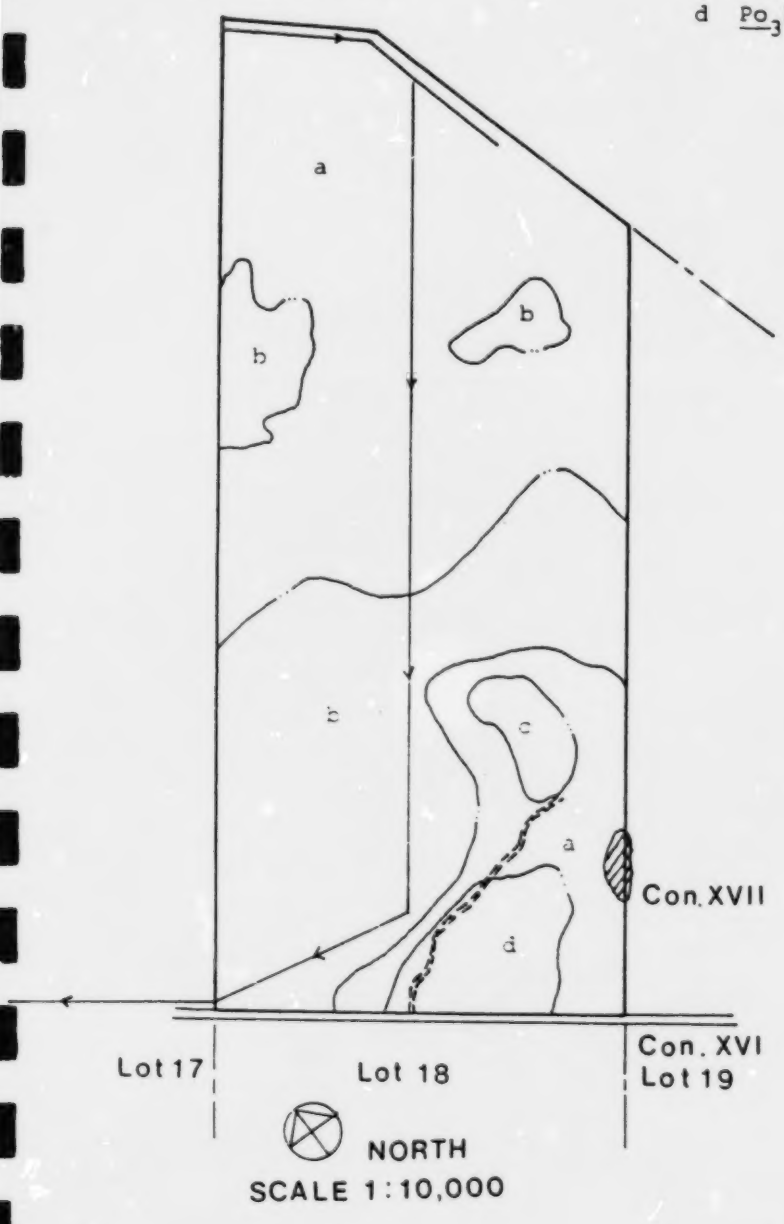
RITCH TRACT

WELLINGTON COUNTY FOREST

Lot 18, Con. XVII
Peel Township
Wellington County

Compt. 1
81 ha., 200 ac.

#	Descrip.	Age	Dia	BA	Area (ha)
a	$\underline{Ce}_5Po_2Ms_2Oc_1$	33	19	16	48
b	$\underline{Po}$ B&S	-	-	10	27
c	$\underline{Ps}_6Pj_4$	38	18	15	2
d	$\underline{Po}_3Pr_3Ce_1Oc_3$	43	20	28	4



VICTORY TRACT

Due to the thinning operations that have been carried out in this area since the last map revision in 1980 it is intended to revise the map for this tract during the period of the plan.

Stand "a"

Description

This is a mixed conifer stand (white spruce 50%, red pine 30%, white pine 10% and jack pine 10%) that was 37 years old in 1981.

The basal area is quite high (31 m^2/ha) which indicates that this stand requires thinning. It was marked for thinning in 1983 to remove some rows (2 out of 6) for access to the stand and to selectively thin the trees in the remaining four rows.

The marked material was sold to B. Hienan of Stoney Creek. Unfortunately only a portion of the marked material was cut and removed leaving the majority of this stand still requiring treatment.

Prescription

Completion of the project to remove the trees currently marked. This may be accomplished by finding a buyer for this material or perhaps taking advantage of a government "program" designed to create employment.

Pruning some of the wild apple trees present to improve the habitat for white-tailed deer will also be done if possible.

Stand "b"

Description

This is a mixed conifer stand dominated by jack pine and Scots pine (jack pine 60%, Scots pine 20%, and white pine 20%) which are for the most part poorly formed and in poor health.

The stand was marked in 1983 for a thinning project to remove the majority of the Scots pine and jack pine. This would have released the white pine from competition and encouraged the establishment of natural hardwood regeneration.

The marked material was purchased by Bill Hienan and as mentioned in stand "a" the cutting was not completed.

Prescription

Finishing this project will be the only work proposed for this stand. As stated in stand "a" we will continue to try and find a commercial buyer for this marked volume, or get the material cut and removed at no cost to the Agreement Forest.

Stand "c"

Description

This is a mixed conifer stand consisting of about 90% red pine and 10% white spruce. The map indicates that this stand also contains 20% Scots pine however this was removed during the thinning operations conducted in 1983-84.

Prescription

There is no work planned for this stand at this time.

Stand "d"

Description

This is a 10 hectare low wet area that contains some scattered poplar.

Prescription

No work will be done in this area for the duration of the plan.

Stand "e"

Description

Small area of white spruce that was established in the early 1960's. This stand is very over-stocked with a basal area of 29 m^2/ha.

This area was also marked for thinning in 1983 and the thinning was not completed.

Prescription

Removal of the marked material will be the only project proposed for this stand.

Stand "f"

Description

This is a moderately productive lowland area containing about 70%

cedar, 20% black ash, and 10% tamarack.

Prescription

No work is planned for this stand at present.

Stand "g"

Description

This is another mixed conifer stand consisting of approximately 50% Scots pine, 30% jack pine, and 20% white spruce. White spruce has however been underplanted throughout the stand and these trees are doing very well.

This stand was also marked for thinning in 1983 to remove the Scots pine and jack pine overstory which would release the underplanted white spruce. The thinning project however was never done.

Prescription

Removal of the marked Scots and jack pine is the intended project for this stand. To maintain the quality of wildlife habitat some of the healthier pine will be left in patches and cedar may be planted in openings.

Stand "h"

Description

This is a small (2 ha) stand containing primarily poplar.

Prescription

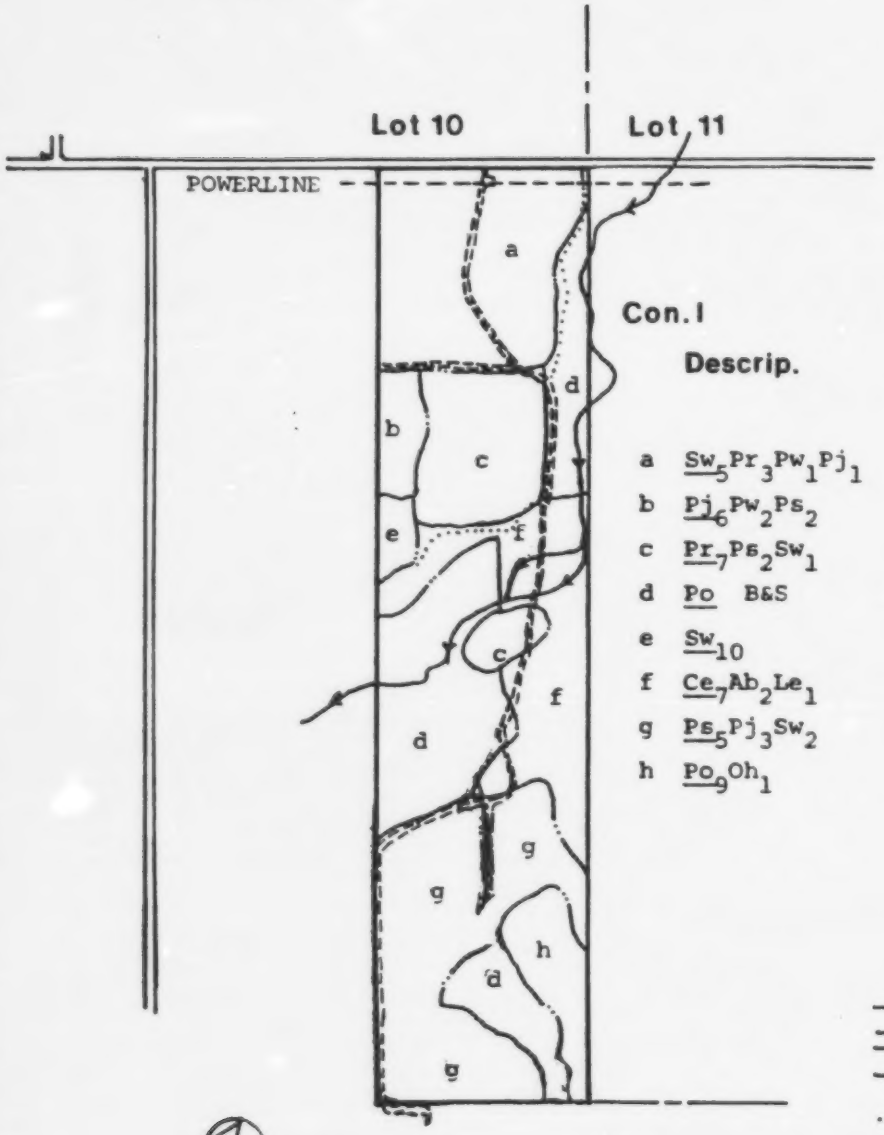
No projects are planned for this stand.

VICTORY TRACT

WELLINGTON COUNTY FOREST

Lot 10, Con. I
Arthur Township
Wellington County

Compt. 2
40·5 ha., 100 ac.



	Descrip.	Age	Dia cm	BA m^2/ha	Area ha
a	$\underline{Sw}_5Pr_3Pw_1Pj_1$	37	20	31	8
b	$\underline{Pj}_6Pw_2Ps_2$	35	19	13	1
c	$\underline{Pr}_7Ps_2Sw_1$	35	20	22	5
d	$\underline{Po}$ B&S	-	-	-	10
e	$\underline{Sw}_{10}$	17	18	29	0.5
f	$\underline{Ce}_7Ab_2Le_1$	53	15	7	5
g	$\underline{Ps}_5Pj_3Sw_2$	34	18	12	9
h	$\underline{Po}_9Oh_1$	35	18	12	2

PEACOCK TRACT

General

No specific forest management work is proposed for this tract for the duration of this plan.

Maintenance of the existing road and the establishment of improved "signage" will be the primary projects carried out.

Hunting is prohibited in this tract and signs indicating this fact will be maintained.

Stands "a", "c", "d", "e"

Description

These stands are all plantations established in the mid to late 1940's. Species planted include red pine, white pine, Scots pine, and white spruce.

Many of the areas that were originally planted with red pine experienced a problem with red pine "dieback". As the name suggests this is a problem that results in the red pine slowly dying. It is in our opinion a site related problem due to the poor soils of this tract. In areas that experienced a large amount of red pine "dieback" the red pine was thinned fairly heavily and white pine was underplanted in 1981.

Stand "b"

This was formerly a red pine stand established in the mid 1940's with the other plantations in this area. The red pine suffered a very high amount of red pine "dieback" and as a result the area was almost completely clear cut of red pine in the late 1970's early 80's and white pine planted in 1981.

The planted white pine has done fairly well and in addition to this quite a bit of natural hardwood (maple, ash, cherry, elm) regeneration has become established.

Stand "g"

This is a small area of upland hardwood forest at the back (south end) of this tract. It contains approximately 70% sugar maple, 10% beech, 10% poplar, with the remaining 10% consisting of a variety of species.

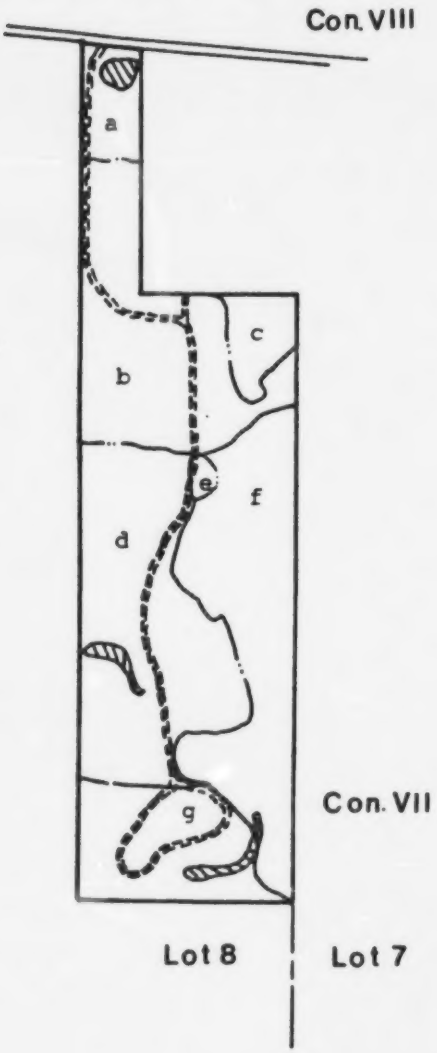
PEACOCK TRACT

WELLINGTON COUNTY FOREST

Pt. Lot 8, Con. VII
Erin Township
Wellington County

Compt. 3
28·3 ha., 70 ac.

	Descrip.	Age	Dia cm	BA m^2/ha	Area ha
a	$\underline{Pw}_4Sw_4Pr_2$	35	18	24	1
b	Pw & Pr B&S	36	20	7	7
c	$\underline{Pr}_6Pj_4$	24	16	10	1
d	$\underline{Pr}_{10}$	36	23	6	9
e	$\underline{Pj}_8Cb_2$	35	15	9	0.3
f	$\underline{Ce}_9Oh_1$	31	15	32	9
g	$\underline{Mh}_7Be_1Po_1Oh_1$	43	20	18	1



Road
Stand Boundary
Water

NORTH
SCALE 1:10,000

BADENOCH TRACT

General

No work is proposed for this area during the planning period.

Stands "a" and "b"

This is a very wet area with stand "b" being classified as swamp and stand "a" only slightly drier and more productive consisting of very scattered poplar.

Stands "c", "d", "e", "f"

These stands are all plantations established in the 1940's. Species planted include white pine, red pine, Scots pine, jack pine, and white spruce. They were thinned in 1983, and stands "c", "d", and "e" had white spruce, sugar maple, and red oak underplanted in 1985. The white spruce was planted in areas thinned fairly heavily of Scots pine and the sugar maple and red oak were planted in an attempt to establish some different species in this tract.

Stand "g"

This is a small area of soft maple and cedar approximately 20 years old.

Stand "h"

This is a 1.5 hectare open area that is being used as a baseball diamond.

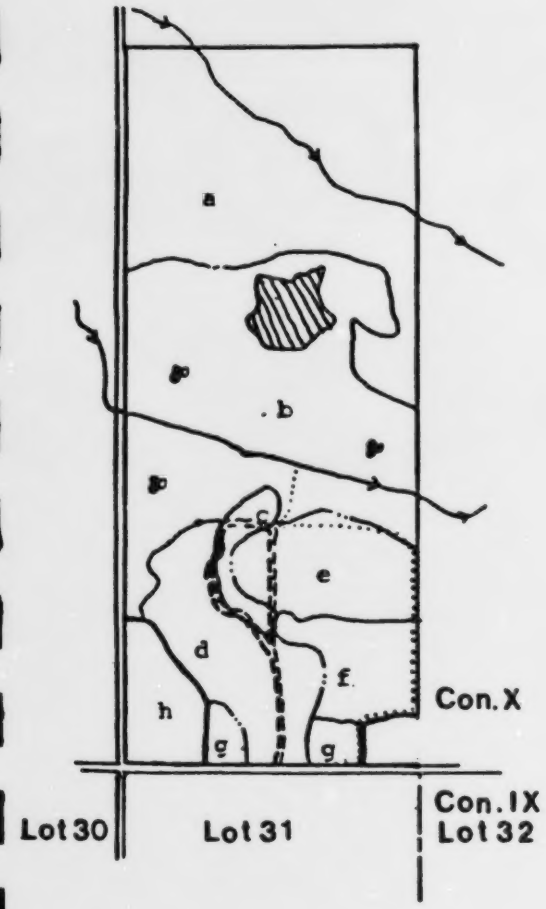
BADENOCH TRACT

WELLINGTON COUNTY FOREST

Lot 31, Con.X
Puslinch Township
Wellington County

Compt. 4
40.5 ha., 100 ac.

	Descrip.	Age	Dia cm	BA m2/ha	Area ha
a	Po B&S	-	-	-	13
b	Swamp	-	-	-	15
c	Ps_9Pr_1	34	18	26	1
d	Pr_{10}	34	18	29	4
e	$Pr_5Pw_4Pj_1$	34	19	27	3
f	Sw_7Pr_3	34	19	17	2
g	Ms_7Ce_3	20	3	-	1
h	UCL	-- Baseball Diamond			1.5



Drainage Ditch
Road
Stand Boundary
Trail
Water

NORTH
SCALE 1:10,000

LITTLE TRACT

General

In the past few years this stand has seen quite a bit of disturbance due to "tip blight". As a result it is intended to re-inventory this tract during the period of this plan and produce a new map. At the present time the stands as they are shown on the existing map will be used and referred to for this plan.

Stand "a"

Description

This is a very low and wet stand that has areas of open water. Soft maple is the predominant tree species in this stand and in some of the extremely wet areas the soft maple is dying due to the high water table.

Prescription

No work is planned for this stand for the duration of the plan.

Stand "b"

Description

This is a pure red pine stand that was planted in 1945. The area is slightly over-stocked with trees and requires a light thinning.

Prescription

The stand was marked in 1983 for a light thinning. This thinning will produce approximately 125 m^3 (50 cords) through the selective removal of poorer quality trees and improve the stand for a proposed "pole" cut in the next 5-10 years. A "pole" cut means that the next thinning should produce material that is suitable for use as utility poles. This thinning would produce revenue for the forest.

As yet the thinning as not been done since we have been concentrating our efforts on the salvage cut of stand "h".

Stand "c"

Description

This is an upland hardwood stand containing primarily sugar maple(70%), with a variety of other species such as beech,

hemlock, white ash, ironwood etc. The hemlock is concentrated in on a fairly scenic ridge and the main road of this tract runs through this area.

This stand was thinned in the early 1970's.

Prescription

There is no work planned for this stand during the period of the plan.

Stand "d"

Description

This is a small (3 ha) area of red pine that was established in the mid 1940's. The red pine in this stand were dying due to the poor soil conditions and the area of dying red pine was clear cut in 1981.

This area was not replanted since natural regeneration of hardwoods (Elm, Hickory, Basswood, Ash, etc.) resulted in an estimated 4200 stems/hectare.

Prescription

Due to the presence of a large amount of natural regeneration no work is planned for this stand at this time.

Stands "e", "f", "g", "h", "j"

These stands occupy an area of 28 hectares which is 35% of the Little Tract area. A considerable percentage of Scots pine was planted in the area in the mid to late 1940's and as mentioned earlier the Scots pine has been severely affected by "tip blight".

These areas were marked in 1983 for the removal of all the dead and dying Scots and jack pine and at this time we estimated that a total of 912 m^3 (350 cords) would be removed.

The Scots pine was sold to Williams Tree Service who did not finish the work.

Prescription

At the present time the inmates from the Maplehurst Correctional Centre in Milton are removing the dead and dying Scots pine.

Some clumps of healthier pine will be left to provide habitat for the Pine Warbler which requires mature, open stands of pine.

Natural regeneration of hardwoods is abundant in some places therefore it will not be necessary to replant the entire area affected. In 1985 approximately 1400 white pine and Norway spruce were planted in the open areas and in the fall of 1985 a 2 hectare area was seeded with red oak acorns in an effort to establish this species in this area.

In the spring of 1987 it is proposed to plant 5000 red oak in a further effort to establish this species. Additional planting in the coming years may be necessary. The actual amount of planting to be done will not be determined until the inmates have finished cutting a given area and surveys are completed to determine how much natural regeneration to "desirable" species is occurring.

Stand "i"

Description

This is a 4 hectare area of pure white pine established in the mid 1940's. It was thinned in 1978/79 and the remaining stems are still spaced fairly far apart.

Prescription

No work is planned for this stand at present.

Stand "k"

Description

This is a small stand of approximately 80% white pine and 20% white spruce that was established at the same time as the other plantations in this tract.

It was selectively thinned in 1983.

Prescription

No work is planned for this stand during the period of the plan.

Stand "l"

Description

This is a small area of upland hardwood near Regional Road 34. It contains approximately 50% sugar maple and 30% poplar with the remaining 20% made up of a variety of species.

Prescription

No work is planned for this stand at the present time.

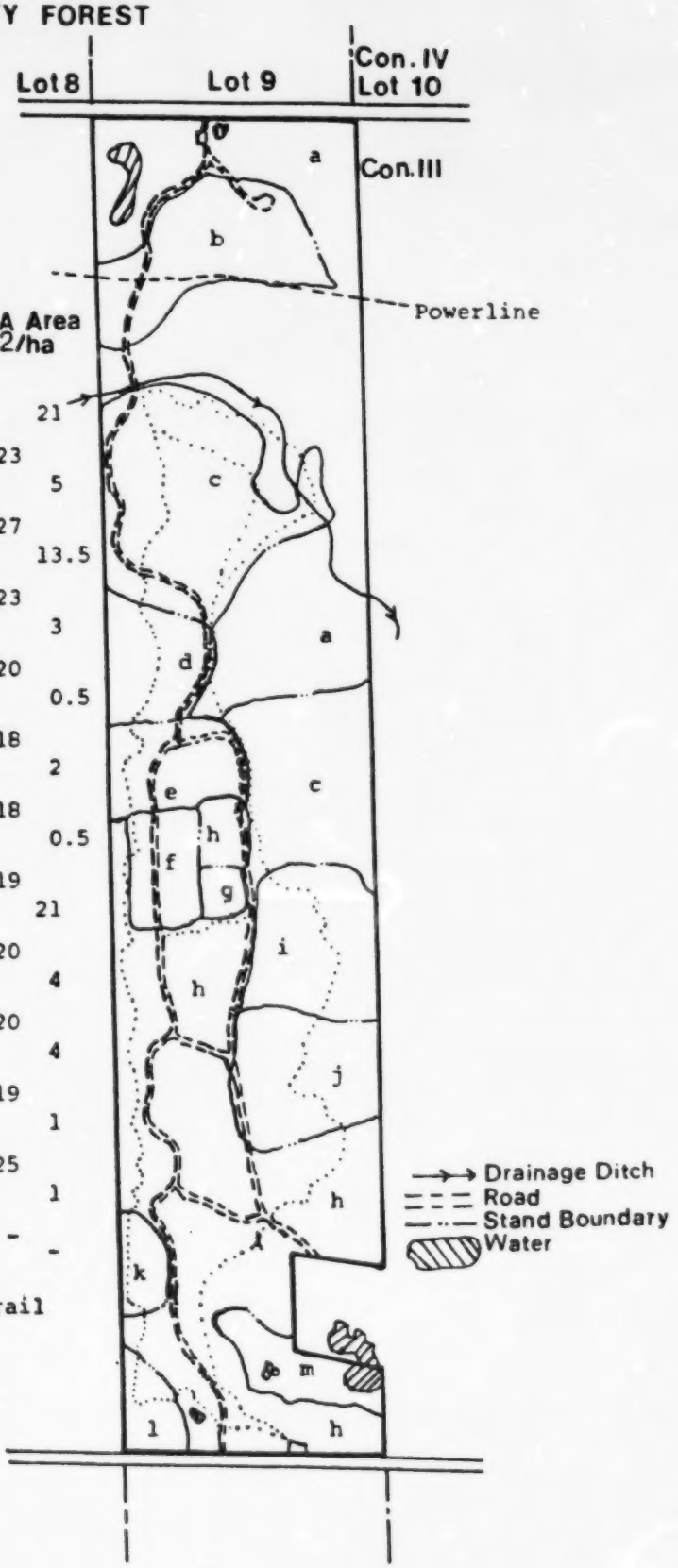
LITTLE TRACT

WELLINGTON COUNTY FOREST

Pt. Lot 9, Con. III
Puslinch Township
Wellington County

Compt. 5
78·9 ha., 195 ac.

	Descrip.	Age	Dia cm	BA m2/ha	Area
a	Ms F.F.	-	-	-	21
b	$\underline{Pr}_{10}$	36	23		
		22			5
c	$\underline{Mh}_7He_1Oh_2$	88	27		
		15			13.5
d	$\underline{Pr}_{10}$	36	23		
		14			3
e	$\underline{Pr}_8Ps_2$	36	20		
		20			0.5
f	$\underline{Pr}_5Pw_4Pj_1$	36	18		
		21			2
g	$\underline{Pw}_9Sw_1$	36	18		
		36			0.5
h	$\underline{Ps}_5Pw_3Pr_1Pj_1$	36	19		
		16			21
i	$\underline{Pw}_{10}$	37	20		
		10			4
j	$\underline{Pw}_6Ps_4$	37	20		
		16			4
k	$\underline{Pw}_8Sw_2$	37	19		
		20			1
l	$\underline{Mh}_5Po_3Oh_2$	33	25		
		10			1
m	Pond	-	-	-	-



CUMNOCK TRACT

Stand "a"

Description

This is a mixed wood stand containing approximately 40% hemlock, 40% cedar, 10% beech, and 10% poplar. It is low and wet in some places and there are numerous openings in the stand.

Prescription

No work is planned for this area.

Stands "b" and "d"

Description

These areas were established in the early 1950's and are predominantly Scots pine. The basal area in both stands is quite high.

Prescription

These stands will be cut to remove all or most of the existing Scots pine stems. Following cutting those areas that were cleared will be replanted to a more desirable species such as white or Norway spruce or white pine.

Fish and Wildlife staff may have crib brushpiles constructed to improve the wildlife habitat features in these stands. This project may be done through a Community Wildlife Involvement Project (CWIP).

Stand "c"

Description

This is a predominately white and norway spruce plantation established in the 1940's. It contains approximately 80% spruce and 20% white pine.

Prescription

This stand requires thinning but due to the small size of the material present it is unlikely that any thinning will be done at the present time. It has not been included in the areas planned for treatment but if the thinning was done in stands "b", "d", "f", and "g" we would also try and have this stand thinned in the same manner as stands "f", and "g".

Stand "e"

Description

This is a very low and wet area of scattered cedar and some soft maple and poplar. Some windthrow was experienced in this stand from the tornado.

Prescription

No work is planned for this stand.

Stands "f" and "g"

Description

Stand "f" was established in the early 1950's and is predominantly white pine (80%) with a component of white spruce(10%) and white elm(10%). Stand "g" is about 9 years younger and is also predominantly white pine (60%) but it also has a very large component of white ash (40%).

The basal area in both stands is fairly high and they require thinning.

Prescription

These stands will be thinned for access (row thinning) plus selectively with approximately 35% of the present basal area to be removed. The row thinnings will be one row in four unless a wider strip is required for access.

The species to be removed will be primarily white pine. The hardwood species will be retained wherever possible.

Stand "h"

Description

This is the area of stand "c" that was devastated by the tornado in 1985. As stated in the "Report on Past Operations" the area has been cleared of debris at no cost to the Agreement Forest and any merchantable material was sold to the Ontario Paper Company in Thorold.

Prescription

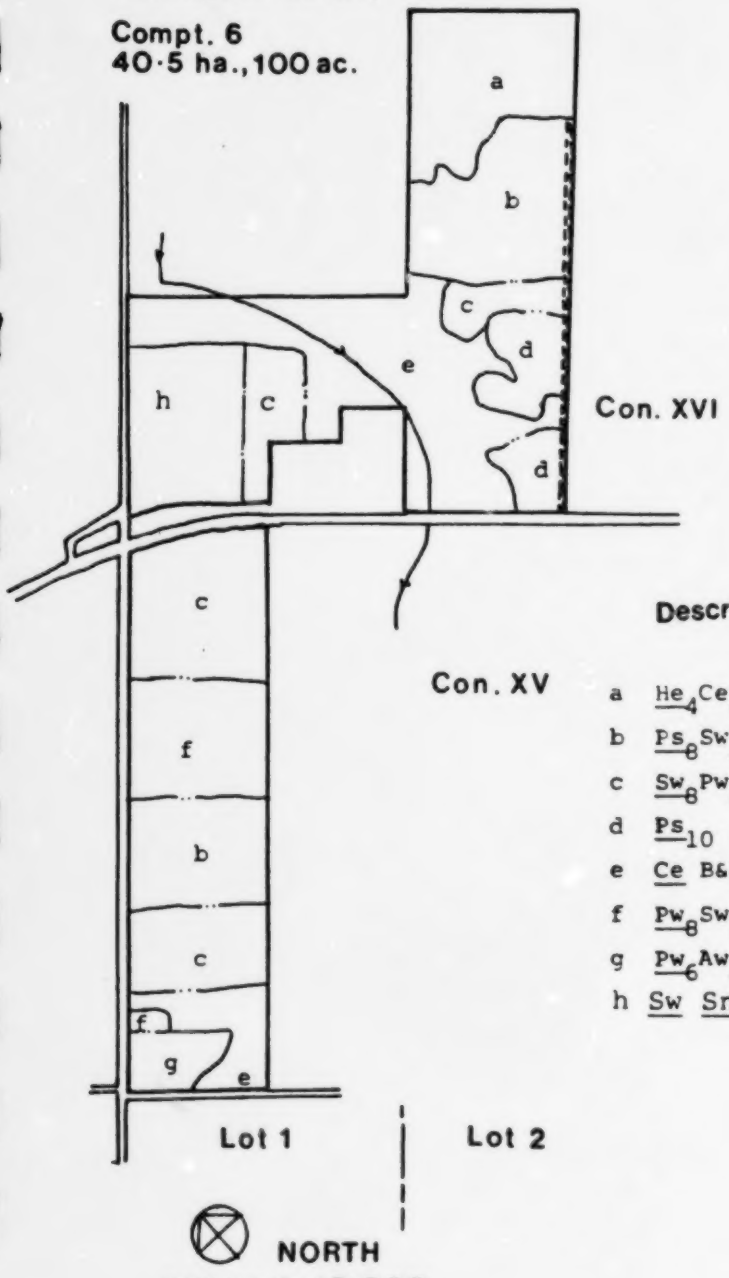
This area will be replanted with Norway spruce in the spring of 1987.

CUMNOCK TRACT

WELLINGTON COUNTY FOREST

Pt. Lot1,2Con.XV,XVI
Nichol Township
Wellington County

Compt. 6
40·5 ha.,100 ac.



	Descrip.	Age	Dia cm	BA m2/ha	Area ha
a	$\underline{He}_4Ce_4Be_1Po_1$	77	23	20	5.2
b	$\underline{Ps}_8Sw_2$	40	19	29	7.7
c	$\underline{Sw}_8Pw_2$	38	18	29	8.4
d	$\underline{Ps}_{10}$	40	18	29	2.6
e	$\underline{Ce}$ B&S	-	-	-	7.8
f	$\underline{Pw}_8Sw_1Em_1$	40	19	38	3.8
g	$\underline{Pw}_6Aw_4$	31	18	33	1.0
h	$\underline{Sw}\ \underline{Sn}_{10}$ B&S	-	-	-	4.0

→→ Drainage Ditch
= = = Road
—·—Stand Boundary

Revised 87'

McNAMARA TRACT

Stands "a" and "d"

Description

These stands are plantations of approximately 90% European larch and 10% spruce established in the mid 1940's. Stand "a" was replanted in 1955 due to a low rate of survival from the original planting.

Prescription

No work is planned for this area.

Stands "b" and "c"

Description

These stands are predominately poplar. Stand "b" is on a more productive site and contains a variety of other species such as balsam fir and cedar. Stand "c" is very wet and the poplar stems are quite young and scattered and there are quite a few shrub species in this stand.

Prescription

No work is planned for this area.

Stand "e"

Description

This is an area of upland hardwood that contains approximately 50% sugar maple, 30% white ash, 10% basswood plus a variety of other species.

Prescription

No work is planned in this stand for the duration of the plan.

Stands "f" and "g"

Description

These stands are plantations established in the late 1940's. They contain primarily white pine (60%) and white spruce (20% in stand "f" and 40% in stand "g") Stand "f" also contains a moderate amount of natural hardwood regeneration (sugar maple 10%, and black cherry 10%).

The presence of the "Cooper's Hawk" was noted in this area by Darryl Coulson in 1983. This species is considered to be Provincially Significant.

Prescription

Stand "f" requires thinning however we will not do any thinning until a study by fish and wildlife staff has been completed to determine what type of use is being made of this area by the "Cooper's Hawk". Once this study has been completed a detailed prescription will be drawn up to manage this stand in such a way that cutting will maintain a favourable habitat for this species.

Stand "h"

Description

This is a small plantation of white cedar (60%), white spruce (30%), and white pine (10%). It was originally planted in the late 1940's and was replanted in 1955 due to a low rate of survival.

Prescription

No work is planned for this area.

Stand "i"

Description

This is a 2 hectare Scots pine stand established about 1940.

Prescription

The Scots pine will be removed from this stand and a more desirable species such as white spruce established. The cutting may be delayed by the current poor market conditions for small conifer material.

The cutting will involve primarily the removal of all the Scots pine however patches of healthier Scots pine will be left to provide a variety of cover conditions which should enhance the wildlife habitat of this area.

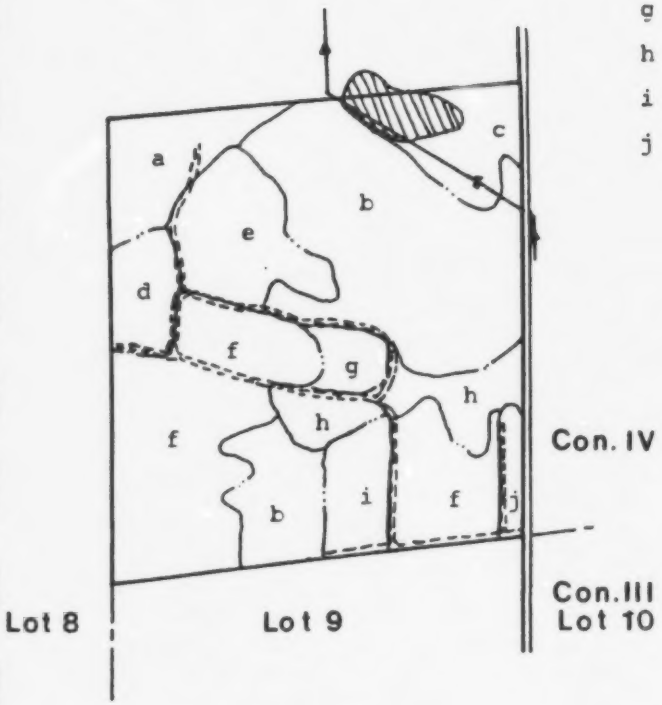
MCNAMARA TRACT

WELLINGTON COUNTY FOREST

Lot 9, Con. IV
W. Luther Township
Wellington County

Compt. 7
40·5 ha., 100 ac.

	Descrip.	Age	Dia cm	BA m^2/ha	Area ha
a	$\underline{Le}_9Sw_1$	25	15	6	2
b	$\underline{Po}_7Oh_2Oc_1$	72	19	10	16
c	Po B&S	-	-	7	2
d	$\underline{Le}_7Sw_3$	34	18	28	1
e	$\underline{Mh}_5Aw_3Bd_1Oh_1$	58	20	17	3
f	$\underline{Pw}_6Sw_2Mh_1Cb_1$	34	18	21	11
g	$\underline{Pw}_6Sw_4$	31	17	15	1
h	$\underline{Ce}_6Sw_3Pw_1$	21	-	-	2
i	$\underline{Ps}_{10}$	34	18	18	2
j	Sw Windbreak	34	18	21	0.5



→→ Drainage Ditch
- - - - Road
——·—— Stand Boundary
Water

NORTH
SCALE 1:10,000

MULHALL TRACT

Stands "a" and "j"

Description

These two stands cover a total of 2.5 hectares and are predominantly Scots pine. Stand "a" is a pure stand of Scots pine and stand "j" is 70% Scots pine and 30% white pine. Both stands were established in the early 1950's and both now require thinning.

Prescription

It is proposed to remove the majority of the Scots pine from these two stands and convert them to more desirable species that are less susceptible to disease. Removal of the Scots pine will provide the underplanted spruce with room to grow and will also be beneficial to the white pine in stand "j" providing them with more growing space.

Some pockets of the healthier Scots pine will be left to provide a diversity of cover types for the various species of wildlife utilizing this tract.

Stands "b", "c", "e", "f", "g", "i"

Description

These stands are plantations established in the mid to late 1950's. Species planted include red pine, white pine, European larch, white spruce, and cedar.

Prescription

No work is planned in these stands at the present time.

Stand "h"

Description

This is a moderately wet site alone the municipal drain which contains primarily poplar with a scattering of other species.

Prescription

No work is planned for this area.

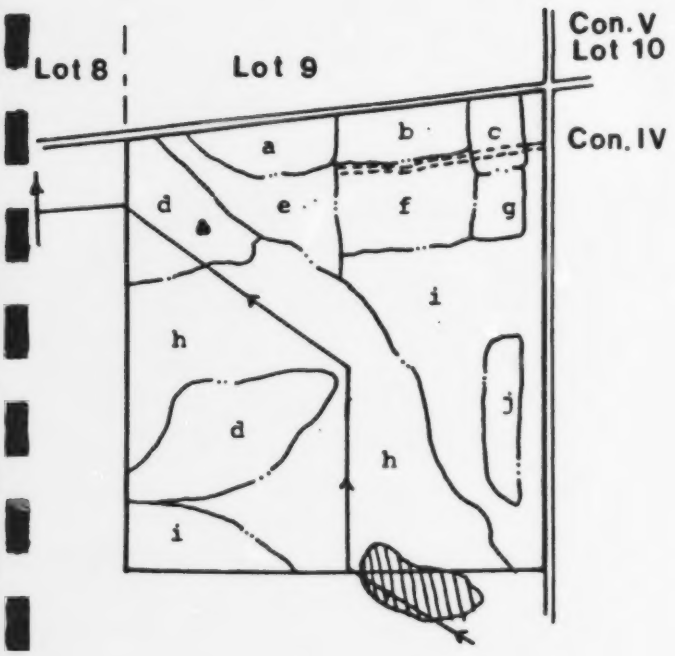
MULHALL TRACT

WELLINGTON COUNTY FOREST

Lot 9, Con. IV
W. Luther Township
Wellington County

Compt. 8
40·5 ha., 100ac.

	Descrip.	Age	Dia cm	BA m^2/ha	Area ha
a	$\underline{Ps}_{10}$	29	15	10	1.5
b	$\underline{Pr}_4Sw_3Pw_3$	24	15	13	1.5
c	$\underline{Pw}_{10}$	21	15	17	1.0
d	Swamp	-	-	-	6.0
e	$\underline{Ce}_{10}$	21	4	-	2.0
f	$\underline{Le}_8Pw_1Sw_1$	21	15	6	3.0
g	$\underline{Pw}_8Sw_2$	25	16.5	19	1.0
h	$\underline{Po}_9Oh_1$	50	20	12	14.5
i	$\underline{Le}_7Pw_2Ce_1$	21	13	6	9.0
j	$\underline{Ps}_7Pw_3$	29	13	8	1.0



Drainage Ditch
Road
Stand Boundary
Water

NORTH
SCALE 1:10,000

BENHAM TRACT

Stand "a"

Description

This plantation was established in the early 1950's and consists of approximately 50% jack pine, 40% white pine, and 10% white spruce. There are some very steep slopes within this plantation.

The present basal area is approximately 17 m^2 per hectare and the average diameter is 15 cm.(6 inches).

Prescription

This stand does not require much work at this time, however we will consider selectively thinning the stand to reduce the percentage of jack pine if this work can be done with minimal cost to the agreement forest. The jack pine component would be reduced between 30 and 50 percent when the thinning is done.

Stand "b"

Description

This is an 11 hectare stand of cedar. There was a large amount of windthrown cedar that was cleaned up by inmates from the Guelph Correctional Centre in 1981.

Prescription

No work is planned for this area.

Stand "c"

Description

This stand is very similar to stand "a" and was established at the same time. The only difference is that there is no Scots pine in this stand and it therefore contains 80% white pine and 20% white spruce.

Prescription

Although this stand requires thinning it has not been included in the proposals for this plan. It will probably be scheduled for thinning during the period of the next management plan.

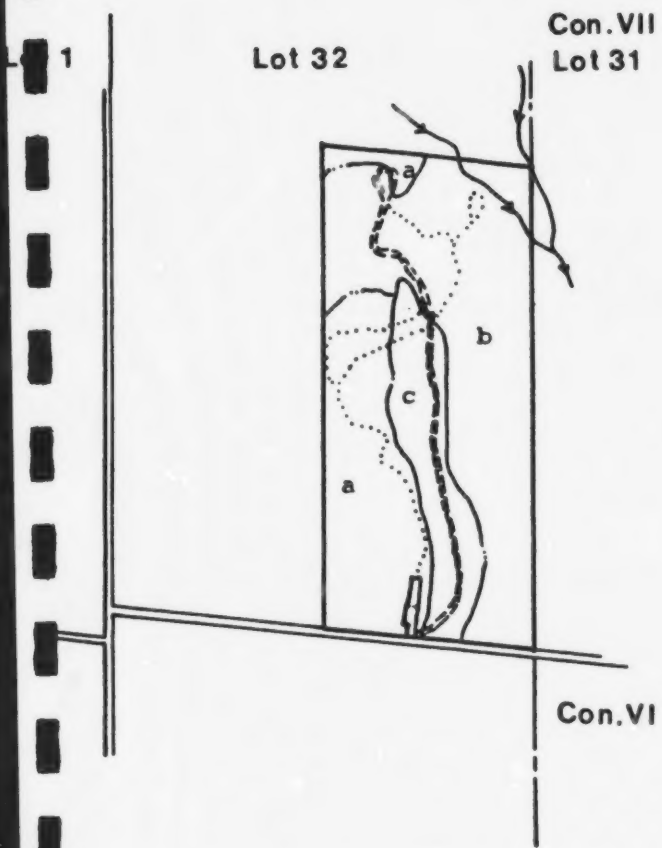
BENHAM TRACT

WELLINGTON COUNTY FOREST

Pt. Lot 32, Con.VII
Eramosa Township
Wellington County

Compt. 9
20·2 ha., 50 ac.

	Descrip.	Age	Dia cm	BA m2/ha	Area ha
a	$\underline{Pj_5}Pw_4Sw_1$	28	15	17	6.2
b	$\underline{Ce}_{10}$	60	18	30	11
c	$\underline{Pw_8}Sw_2$	28	18	29	3



Drainage
Road
Stand Boundary
Trail

NORTH
SCALE 1:10,000

EVERTON TRACT

Stand "a"

Description

Mixed conifer stand of 50% white spruce and 50% Scots pine established in the early 1950's. The present basal area is approximately 20 m^3/ha and the average diameter is 18 cm.

Prescription

The majority of the Scots pine stems will be removed from this area. Areas that are clear-cut will be replanted with a more desirable species such as white pine or Norway spruce.

Stand "b"

Description

This plantation is slightly younger than the other stands in this tract. It was established approximately 8 years later. It contains 70% white pine and 30% white spruce.

Prescription

No work is planned for this area at this time.

Stand "c"

Description

This is a mixed conifer plantation established in the early 1950's and consists of approximately 60% Scots pine, 20% white pine and 20% white spruce.

The present basal area is approximately 23 m^3 per hectare and the average diameter is 18 cm (7 inches).

Prescription

This stand will be row thinned and selectively thinned to remove the majority of the Scots pine. The Scots pine does not yet have the disease tip blight (Sphaeropsis sapinea) however it is anticipated that this disease will be a problem in the future.

Stand "d"

Description

This stand is very similar to stand "a" except it does not contain Scots pine. It consists of 60% white spruce, 30% white pine and 10% red pine.

Prescription

Although this stand requires thinning it has not been scheduled to be done during the period of this plan.

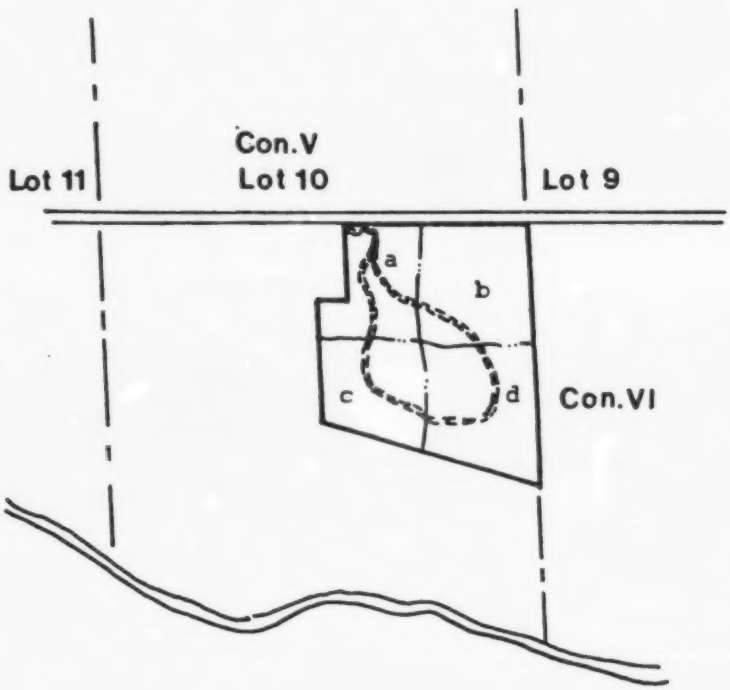
EVERTON TRACT

WELLINGTON COUNTY FOREST

Pt. Lot 10, Con.VI
Eramosa Township
Wellington County

Compt. 10
9·7 ha., 24 ac.

	Descrip.	Age	Dia cm	BA m2/ha	Area ha
a	$\underline{Sw_5}Ps_5$	29	18	20	1.7
b	$\underline{Pw_7}Sw_3$	21	15	18	3
c	$\underline{Ps_6}Pw_2Sw_2$	29	18	23	2
d	$\underline{Sw_6}Pw_3Pr_1$	29	19	35	3



NORTH

SCALE 1:10,000

Road
Stand Boundary

SMALE TRACT

Stand "a"

Description

This is a young mixed hardwood stand that is under-stocked. A small area of planted red oak and black walnut exists at the north-west corner of the stand. Quality of theses planted trees is generally low.

Prescription

No work is planned for this stand during the period of this plan.

Stand "b"

Description

This stand is composed of scattered cedar trees in an imperfectly drained area.

Prescription

No treatment is warranted in this stand at the present time.

Stand "c"

Description

This plantation is composed of a mixture of red and white pine established about 1950. An initial row thinning was carried out in 1984, and some of the white pine crop trees have been pruned.

Prescription

No further thinning is required during the period of this plan due to low stocking.

Stand "d"

Description

This is an imperfectly drained area that is regenerating naturally to ash.

Prescription

No treatment is feasible within the next five years. Any small openings will be retained to benefit wildlife.

Stand "e"

Description

This area was a Scots pine stand consisting of trees of poor form. It was clear-cut in 1984 in conjuction with thinning operations on the property. At the present time it is regenerating to shrubs and hardwood tree species.

Prescription

No work is planned for this area during the next five years.

Stand "f"

Description

Plantation comprising a mixture of red pine, white pine, white spruce and white ash established in approximately 1950. Suppression of the spruce component by the faster growing pine species', along with mortality of some trees over the years has left the remaining pine widely spaced. Red pine is generally the dominant species in this stand and appears quite healthy, although of only fair "form" due to the wide spacing. White pine are scattered throughout the stand with a fair amount of "blister rust" (*Cronartium ribicola*) infection and mortality.

Prescription

Because of the low stocking no thinning is necessary.

Stand "g"

Description

Poorly drained area supporting a stand of scattered white spruce.

Prescription

No treatment.

Stand "h"

Description

White spruce plantation established in the late 1940's. An initial thinning in 1984 was conducted in a "cross-row" pattern due to the narrow and irregular spacing between rows.

Prescription

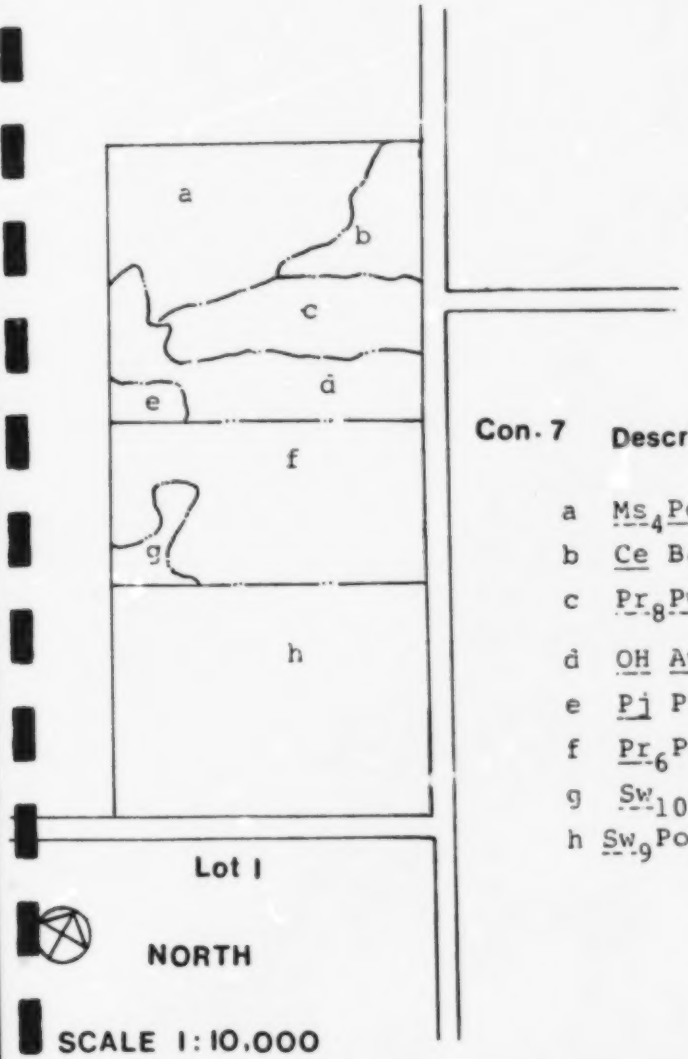
No work required in the next five years.

SMALE TRACT

WELLINGTON COUNTY FOREST

Lot 1, Con. 7
Minto Township
Wellington County

Compt. 11
44.1 ha., 109 ac.



Con. 7	Descrip.	Age	Dia cm	Area ha
a	$Ms_4 Po_2 Pw_1 Sw_1 He_1 Aw_1$	41	17	7.5
b	Ce B&S	-	-	1.7
c	$Pr_8 Pw_2$	32	16	3.6
d	OH Aw_{10} B&S	-	-	4.5
e	$Pj\ Ps_{10}$	38	17	0.5
f	$Pr_6 Pw_2 Sw_2$	33	18	10.3
g	Sw_{10} B&S	-	-	1.0
h	$Sw_9 Po_1$	36	13	15.0

Road
Stand Boundary

FLEMING TRACT

General

No work is planned for this tract during the period of this plan.

Stands "a", "b", "f"

These plantations were established shortly before and after the acquisition of this property by the County. Stands "a" and "b" were first planted by boy scouts in 1975 and have had one or two replantings done since then. Stand "f" is a little younger and it was established in 1978. Species planted were primarily white spruce and white pine.

Stands "c" and "d"

These are fairly imperfectly drained areas that contain a mixture of cedar, poplar, some yellow birch and other species of trees and shrubs.

Stand "e"

This is an old gravel pit area.

Stand "g"

Upland hardwood stand containing primarily sugar maple. This stand was last thinned in 1980.

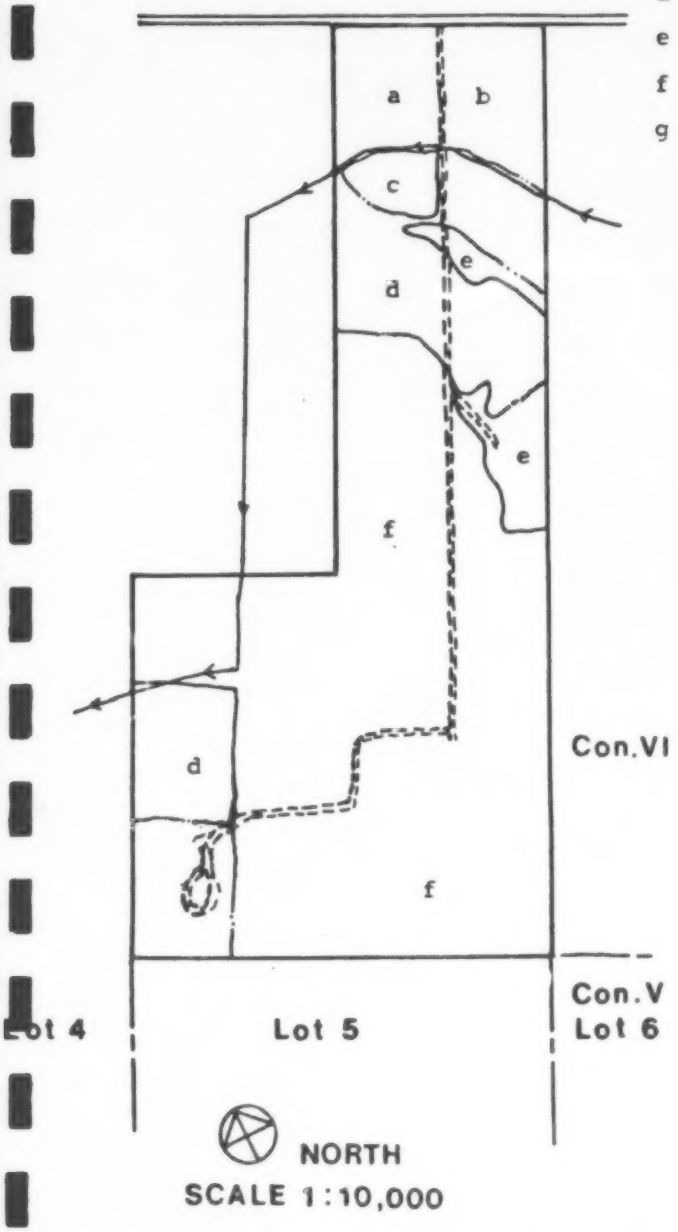
FLEMING TRACT

WELLINGTON COUNTY FOREST

Pt. Lot 5, Con.VI
Maryborough Township
Wellington County

Compt. 12
56·7 ha., 140 ac.

	Descrip.	Age	Dia cm	BA m^2/ha	Area ha
a	$\underline{Sw}_{10}$	9	-	-	3
b	$\underline{Pw}_5Sw_5$	9	-	-	3
c	$\underline{Ce}_4Po_3By_3$	50	15	16	1
d	$\underline{Oh}_8Po_2$ P.F.	36	-	16	3
e	U.C.L.	-	-	16	2
f	$\underline{Sw}_6Pw_3Oh_1$	7	-	-	41.7
g	Mh_9Oh_1	78	25	14	3



Drainage Ditch
Road
Stand Boundary

APPENDIX C

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2. Official Plan of Eramosa Township, August 1, 1985

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